



# **SY-KT600 DRAGON Plus Motherboard**

## **Quick Start Guide**

**VIA 8237 Serial  
ATA Driver  
Installation**

**USB 2.0 Driver  
Installation**

**Audio Driver  
Installation**

**The SOYO CD**

**Quick BIOS  
Setup**

**Hardware  
Installation**

**Introduction**



1. AGP cards running at 3.3V are not supported; only AGP cards running at 1.5V can be used in this mainboard.
2. Please read the user guide before proceeding with your installations. Serious damage may occur if the procedure is not followed properly.
3. If you have any problem getting your system to work, please follow the troubleshooting tips in your user guide.
4. For immediate Technical questions, please visit <http://www.soyousa.com/support> and <http://www.soyousa.com/kb>.

## SY-KT600 DRAGON Plus Motherboard

AMD® K7 Athlon & Duron™ processors  
VIA KT600 AGP/PCI Motherboard  
100/133/166/200 MHz Front Side Bus supported  
ATX Form Factor

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### **About This Guide:**

This Quick Start Guide can help system manufacturers and end users in setting up and installing the motherboard. Information in this guide has been carefully checked for reliability; however, to the correctness of the contents there is no guarantee given. The information in this document is subject to amend without notice.

For further information, please visit our **Web Site** on the Internet. The address is "<http://www.soyo.com.tw>".

**KT600 DRAGON Plus Series - Version 1.1- Edition: August 2003**

\* These specifications are subject to amend without notice

## SY-KT600 DRAGON Plus *Quick Start Guide*

# 1 Introduction

Congratulations on your purchase of the **SY-KT600 DRAGON Plus** motherboard. This *Quick Start Guide* illustrates the steps for installing and setting up your new motherboard.

This guide provides all users with the basic steps of motherboard setting and operation. For further information, please refer to the *SY-KT600 DRAGON Plus motherboard User's Manual* that came with your motherboard.

## Unpacking

When unpacking the motherboard, check for the following items:

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◆ The SY-KT600 DRAGON Plus AGP/PCI Motherboard




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◆ The Quick Start Guide




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◆ The Installation CD-ROM



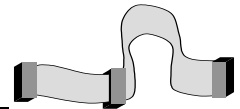

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◆ SOYO Bonus Pack CD-ROM



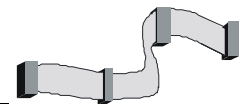

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◆ One IDE Device ATA 133 Flat Cable




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◆ One Floppy Disk Drive Flat Cable



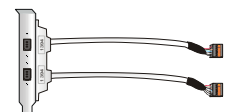

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◆ One Heat Sink Compound



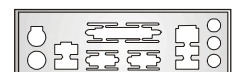

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◆ One 1394 Bracket



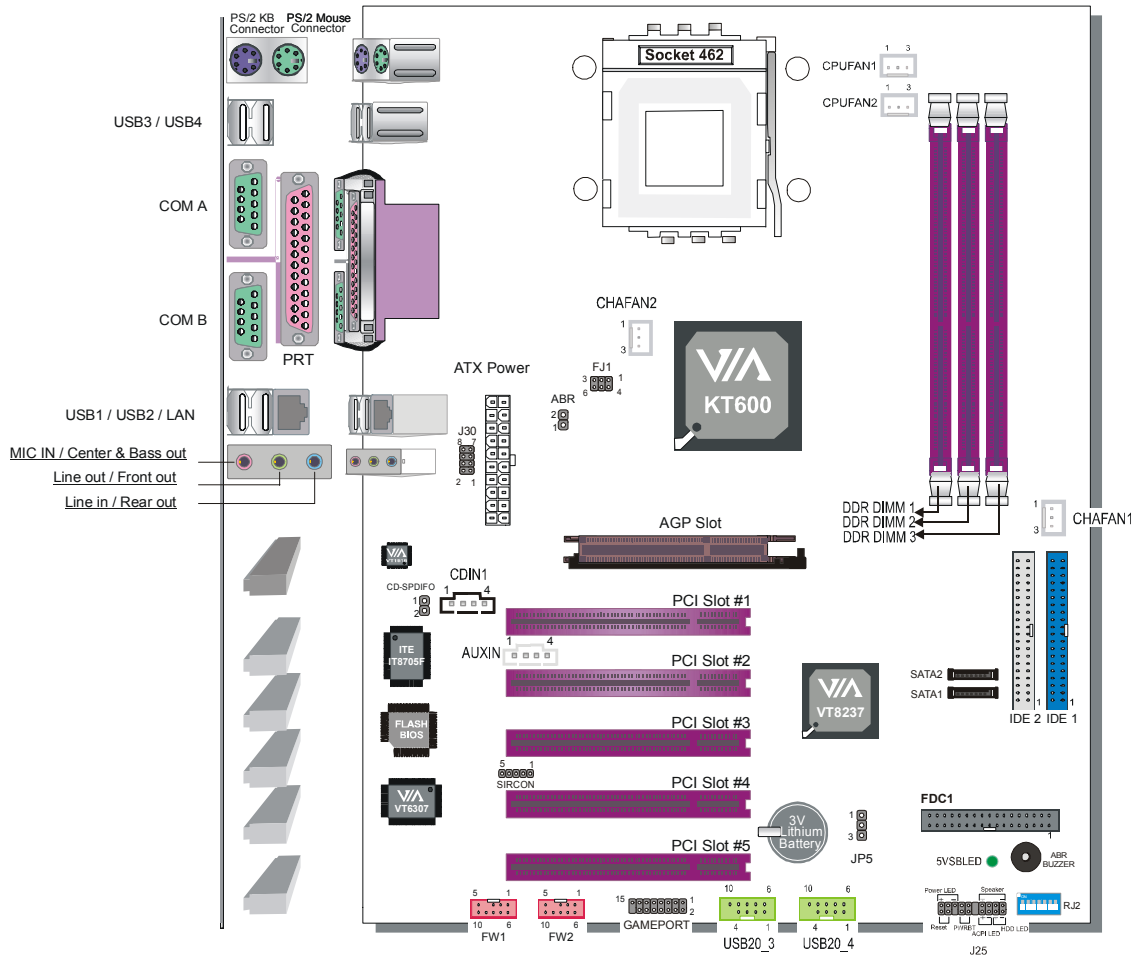

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◆ One Back Panel



# SY-KT600 DRAGON Plus Quick Start Guide

## SY-KT600 DRAGON Plus Layout



Introduction

### **Key Features**

<b>CPU</b>	Supports AMD 462 pins Socket A processors: <ul style="list-style-type: none"><li>➤ Athlon XP (Palomino/Thoroughbred/Barton) (200/266/333/400 MHz FSB)</li><li>➤ Duron/Morgan</li></ul>
<b>Chipset</b>	AMD® KT600/ 8237 Chipset
<b>Memory</b>	➤ Supports PC2100, PC2700 and PC3200 DDR (non-registered and ECC) memory modules.
<b>AGP</b>	1x AGP master 4x/ 8x slot (1.5v only)
<b>PCI</b>	5x 32-bit bus master PCI slots
<b>I/O</b>	ITE IT8705F Super I/O controller supporting: <ul style="list-style-type: none"><li>➤ Floppy disk controller</li><li>➤ Parallel port (SPP, EPP and ECP compliant)</li><li>➤ 2x 16550A compatible RS232 serial ports</li><li>➤ PS/2 Keyboard and mouse</li><li>➤ 1x gameport pin header</li><li>➤ Hardware monitor for monitoring temperatures, voltages and fan speeds in the system.</li></ul>
<b>Storage</b>	<ul style="list-style-type: none"><li>➤ 8237 Integrated Parallel ATA controller supporting up to 4x UDMA 33/66/100/133 Parallel ATA devices.</li><li>➤ 8237 Integrated Serial ATA controller supporting up to 2x UDMA 150 hard disks in normal or RAID 0,1 mode</li></ul>

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USB 2.0	8x USB 2.0 compliant ports (4x on rear IO panel, 4x pin headers.)
IEEE 1394	Onboard VIA VT6307 IEEE1394 Firewire controller with 2x pin header
Sound	VT1616 6 channel Audio Codec
Network	10/100 MBps 100Base-T Ethernet controller, supporting Wake-On-Lan (WOL)
BIOS	<ul style="list-style-type: none"><li>➤ Power Failure resume function to allow the system to turn on or off after a power failure, which is indispensable for server systems.</li><li>➤ Wake On Ring and Power On by Alarm to allow your system to wake up from suspend or power on through the modem or RTC alarm.</li><li>➤ Multiple boot, allowing your system to boot from for example CD-ROM</li></ul>

## **2 Installation**



To avoid damage to your motherboard, please follow these simple rules while handling this equipment:

- Before handling the motherboard, ground yourself by touching on to an unpainted portion of the system's metal chassis.
- Remove the motherboard from its anti-static packaging. Hold the motherboard by the edges and avoid touching its components.
- Check the motherboard for damage. If any chip appears to be loose, press carefully to seat it firmly in its socket.

Follow the directions in this section, which is designed to guide you through a quick and correct method to install your new **SY-KT600 DRAGON Plus** motherboard. For detailed information, please refer to the *SY-KT600 DRAGON Plus motherboard User's Manual and Technical Reference* online manual on the CD-ROM package that came with your motherboard.

Gather and prepare all necessary components to complete the installation successfully:

- ◆ Socket A processor with CPU cooling fan (boxed type)
- ◆ DDR SDRAM module(s)
- ◆ Computer case with adequate power supply unit
- ◆ Monitor
- ◆ PS/2 or USB Keyboard
- ◆ Pointing Device (PS/2 or USB Mouse)
- ◆ Speaker(s) (optional)
- ◆ Disk Drives: HDD, CD-ROM, Floppy drive...
- ◆ External Peripherals: Printer and Modem (optional)
- ◆ Internal Peripherals: Modem and LAN cards (optional)

**Note:** If you want to use an external speaker connected to "Line-out" port, please make sure to use an "amplified speaker" that can generate proper output sound volume.



### ***Install the Motherboard***

We will now begin the installation process. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.

**Step 1-** Install the Central Processing Unit (CPU)

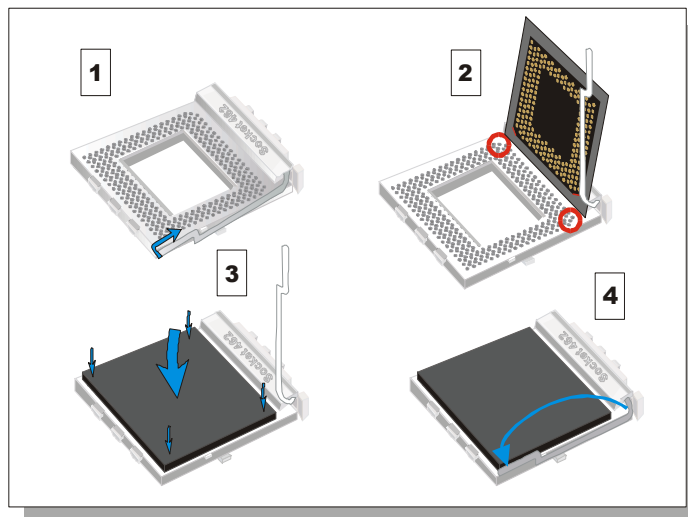
**Step 2-** Install memory modules

**Step 3-** Install expansion cards

**Step 4-** Connect cables, case wires, and power supply

#### **Step 1. Install the CPU**

**CPU Mount Procedure:** To mount the AMD® K7 Athlon™, Athlon™ XP & Duron™ processor that you have purchased separately, follow these instructions.



1. Lift the socket handle up to a vertical position.
2. Align the blunt edge of the CPU with the matching pinhole edge on the socket.
3. Seat the processor in the socket completely and without forcing.
4. Then close the socket handle to secure the CPU in place.



Remember to connect the CPU Cooling Fan to the appropriate power connector on the motherboard. *The fan is a key component that stabilizes the system. It prevents the equipment from overheating and prolongs the life of your CPU. If your FAN is not connected or connected improperly your CPU can be permanently damaged.*

## SY-KT600 DRAGON Plus *Quick Start Guide*

5. Set the jumpers on the FJ1 jumper block to the correct FSB for your CPU.

FJ1	100 MHz	133 MHz	166 MHz	200 MHz
Clock Select				

### RJ2 Dipswitch

This dipswitch sets the ratio of your CPU. Note that this switch will only work if you have an unlocked CPU.

**SW** : OFF=1  
ON=0

### RATIO UNDER 12.5

<i>FID Codes for SW 1 ~ 7</i>			
Four-Bit FID	Clock Multiplier	Four-Bit FID	Clock Multiplier
0000000	11.0	0000010	7.0
0010000	11.5	0010010	7.5
0001000	12.0	0001010	8.0
0011000	12.5	0011010	8.5
0000100	5.0	0000110	9.0
0010100	5.5	0010110	9.5
0001100	6.0	0001110	10.0
0011100	6.5	0011110	10.5

### RATIO OVER 12.5

<i>FID Codes for SW 1 ~ 7</i>			
Four-Bit FID	Clock Multiplier	Four-Bit FID	Clock Multiplier
1000101	13.0		
1010101	13.5		
1001101	14.0		
1000011	15.0		
1001011	16.0		
1000111	17.0		

### CPU Fan Installation

Your Socket A processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.



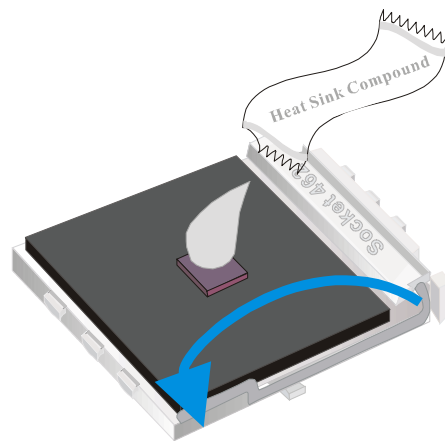
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**Note:** Remember to connect the fan to the appropriate power source.

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**CPU Fan Mount Procedure:** To prevent scratch or damage on the motherboard, please follow the instructions on how to mount the CPU fan properly.

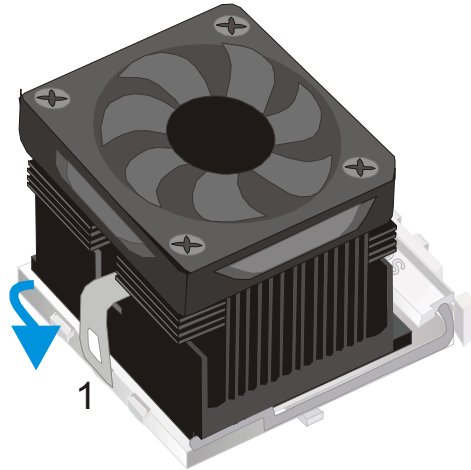
1. Apply thermal paste to the die of the CPU.



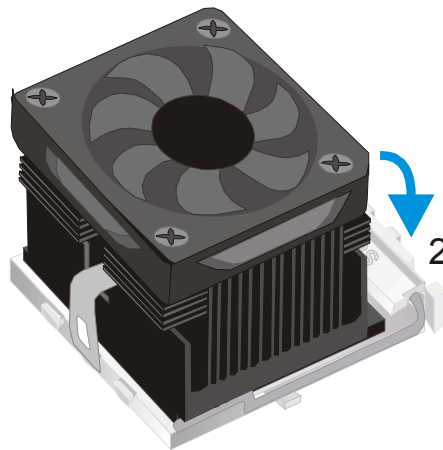
## SY-KT600 DRAGON Plus *Quick Start Guide*

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2. Carefully mount the fan on top of the CPU and clip-on the first lock.

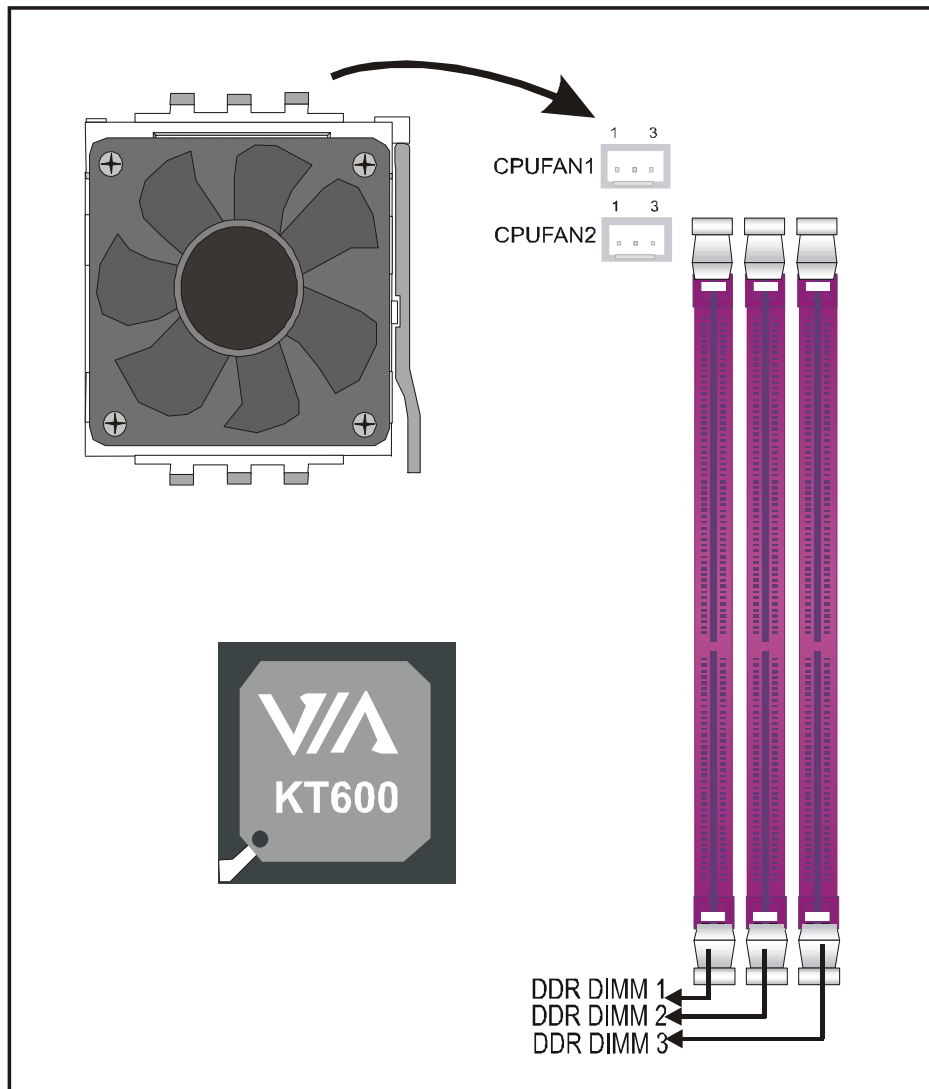


3. Clip-on the second lock and please make sure not to damage/scratch the board.



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4. Connect the power connector to CPUFAN1.



**Note:** If the fan is defective or Power connector is not connected to CPUFAN1, the system will enable Fan Off Control function. See below for more information on FOC function.

When the CPU temperature exceeds, the temperature set in the CPU Temp. Protection in BIOS setup, SOYO's Anti Burn Regulator (ABR) will automatically shutdown the system and beep until the power button is pressed for one time.

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### FOC (Fan-Off Control)

The newly designed SOYO “FOC” is based on the concept of total protection for the CPU, which is very different from what is currently seen on the market. The H/W control function is used to see a passive security system of monitoring and warning. S/W Simultaneous Signal Follow-up techniques and Auto Power Off System are included to prevent possible damage caused by the malfunctioning of the CPU fan. With the help of “O/S On Time Monitoring And Warning” function, provided by the H/W monitoring system, the double-protection purpose is achieved.

“FOC” includes the following functions:

**Simultaneous Signal Follow Up:** Before the system enters the O/S, H/W will detect the signals of the CPU fan pins, get their revolution information and send it to the BIOS.

**Auto Power Off System:** If the BIOS receives the information of CPU fan revolution, it continues to function normally. If no signal is received, it will inform the system and disconnect the power supply immediately to protect the CPU from overheating.

**Note:** The following must be observed to secure the normal functioning of “Fan-Off Control”:

1. FOC only works on CPUFAN 1.
2. A CPU fan with sensor pin must be used.
3. CPU fans approved by AMD are strongly recommended.

The “HOT KEY” function is provided for the CPU fans without sensor pins, to avoid the power off. Users may press the “Insert” key to jump over the “Power Off” mode; go to the BIOS and disable “FOC”. Now system can be booted normally.

We provide the following User-Friendly protection features:

1. Fan-Off Control: The motherboard detects the status of the CPU fan and protects the CPU by automatically disconnecting the power supply. The default value of this function is Enable. After booting up, the user may disable it.
2. Heat Dissipation Paste: Heat Dissipation Paste is included for all Socket-A motherboards, to enhance the heat dissipation capability.

Furthermore, we strongly recommend our users to enable the function of H/W monitoring in the BIOS. This function, together with the FOC, provides the total protection to the CPU and allows it to maximize its performance.

**Note:** FOC will only work during BOOT-up. Once the system enters the operating system, FOC will be disabled.

### ABR (Anti Burn Regulator)



SOYO's ABR (Anti Burn Regulator) is a specially designed hardware circuit that works hand in hand with the CPU's internal sensor in monitoring the temperature of the CPU and prevent it from overheating.

Once the heat accumulated in the CPU is over the set limit. ABR will automatically shut down the system power and warn you with a beeping sound. To de-activate the beeping sound, **un-plug the AC power cord**. We recommend you to check the cause of the overheating and let the processor cool down before powering on the system.



**Note:** ABR supports AMD Athlon XP and Morgan CPU. Thunderbird and Duron CPUs are not supported

Some early versions of the 2400+ and 2600+ XP CPUs when used in this motherboard will automatically activate the ABR function, thus making a beeping sound and shut down your system. If this compatibility issue arises, you need to disable the ABR function via the ABR hardware jumper.

Setting	Enabled	Disabled
ABR Jumper	 1 2	 1 2

### Step 2. Configure Memory

Your board comes with three DIMM sockets, providing support for up to 3GB of main memory using unbuffered and ECC DIMM modules. On this motherboard, DRAM speed can be set independent from the CPU FSB speed.

#### *Memory Configuration Table*

Number of Memory Modules	DIMM 1	DIMM 2	DIMM 3
RAM Type	DDR RAM PC2100/PC2700/3200 <i>(non-register &amp; ECC)</i>		
Memory Module Size (MB)	128 / 256 / 512 / 1024 MB		

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### Step 3. Installation of Expansion Cards

The motherboard has 1 AGP slot and 5 PCI slots.

1. Read the related expansion card's instruction document before inserting the expansion card into the computer.
2. Press the expansion card firmly into expansion slot in the motherboard.
3. Make sure the metal contacts on the card are correctly seated in the slot.
4. Replace the screw to secure the slot bracket of the expansion card.
5. Install driver for the operating system you use.



**Note:** AGP cards working on 3.3V are not supported. Only AGP cards working on 1.5V can be used in this M/B. For AGP card voltage specification, please check the AGP card manual or contact your AGP card's manufacturer.

### Step 4. Connections to the Motherboard

This section tells how to connect internal peripherals and the power supply to the motherboard.

The internal peripherals consist of IDE devices (HDD, CD-ROM), Floppy Disk Drive, Chassis Fan, Front Panel Devices (Internal Speaker, Reset Button, IDE LED and power switch), Wake-On-LAN card and other devices.

For more details on connecting internal and external peripherals to your new SY-KT600 DRAGON Plus motherboard, please refer to *SY-KT600 DRAGON Plus motherboard User's Manual and Technical Reference* online manual on the CD-ROM.

#### Connectors and Plug-ins

CDSPDO		Standard IrDA (Infrared Device Header): SIRCON													
Pin1	Pin2	Pin1	Pin2	Pin3	Pin4	Pin5									
CDSPDO	GND	VCC	NC	IRRX	GND	IRTX									
MIC & LED Connector J30															
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8								
Line_Out_L	GND	Line_Out_R	GND	MIC IN2	GND	LAN_ACTIVE_LED	VCC								
GAMEPORT															
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9	Pin10	Pin11	Pin12	Pin13	Pin14	Pin15	Pin16
VCC	VCC	JOY A3	JOY B3	JOY A1	JOY B1	GND	MIDI OUT	GND	JOY B2	JOY A2	JOY B4	JOY A4	MIDI IN	VCC	NC



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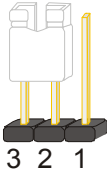
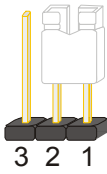
USB20_3 / USB20_4										
Pin1	Pin2	Pin3	Pin4	Pin6	Pin7	Pin8	Pin9	Pin10		
VCC	Data(-)	Data(+)	GND	VCC	Data(-)	Data(+)	GND	GND		
1394: FW1										
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9	Pin10	
A0PC	GND	B0PC	NC	PWR0	A0MC	CGND	B0MC	PWR0	CGND	
1394: FW2										
Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9	Pin10	
A1PC	GND	B1PC	NC	PWR1	A1MC	CGND	B1MC	PWR1	CGND	
CPU Cooling Fan: CPUFAN1					CPU Cooling Fan: CPUFAN2					
Pin1	Pin2	Pin3			Pin1	Pin2	Pin3			
GND	12V	SENSOR			GND	12V	NC			
Chassis Fan: CHAFAN1					Chassis Fan: CHAFAN2					
Pin1	Pin2	Pin3			Pin1	Pin2	Pin3			
GND	12V	SENSOR			GND	12V	NC			
CD -IN: CDIN1 / AUXIN1						Pin1	Pin2	Pin3	Pin4	
Connect the CD Line-in cord from the CR-ROM device to the matching connector CDIN						CDIN1	L	G	G	R
						AUXIN1	L	G	G	R
<p>The diagram shows a 10-pin header with the following connections:          - Pins 1-2: Power LED (Anode on Pin 1, Cathode on Pin 2)          - Pins 3-4: Speaker (Left channel on Pin 3, Right channel on Pin 4)          - Pins 5-6: Reset (Anode on Pin 5, Cathode on Pin 6)          - Pins 7-8: PWRBT (Power On/Off switch)          - Pins 9-10: HDD LED (Anode on Pin 9, Cathode on Pin 10)</p>					Power LED					
					Pin1	Pin2	Pin3			
					VCC	NC	GND			
					Speaker					
Pin1	Pin2	Pin3	Pin4							
VCC	NC	NC	Speaker out							
HDD LED		PWRBT		RESET						
Pin1	Pin2	Pin1	Pin2	Pin1	Pin2					
LED Anode	LED Cathode	Power On/Off	GND	Power Good	GND					
ATX Power On/Off: PWRBT										
Connect your power switch to this header (momentary switch type).										
<b>To turn off the system, press this switch and hold down for longer than 4 seconds.</b>										
ATX Power Supply: ATX PW										
Attach the ATX Power cable to this connector. (This motherboard requires an ATX power supply, an AT power supply can NOT be used.)										
Note: We recommend using an AMD approved power supply or at least 350W.										
When using the Power-On by PS/2 Keyboard function, please make sure the ATX power supply is able to provide at least 720mA on the 5V Standby lead (5VSB) in order to meet the standard ATX specifications.										

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### CMOS Clear (JP5)

In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

1. Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5. Its white cap can easily identify this jumper.
2. Put the jumper back to 1-2 to allow writing of new data into the CMOS memory.

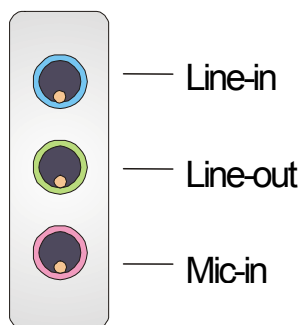
CMOS Clearing	Clear CMOS Data	Retain CMOS Data
JP5 Setting	<p>Short pin 2-3 for at least 5 seconds to clear the CMOS</p> 	<p>Short pin 1-2 to retain new settings</p> 
<p><i>Note: You must unplug the ATX power cable from the ATX power connector when performing the CMOS Clear operation.</i></p>		

### On-board Speaker connection

When using 2-channel speaker, connect the speaker cable to Line-out.

If you're using 4 channel speaker, connect the front L/R speakers to Line-out and rear L/R speakers to Line-in. Make sure that the audio software is set for 4 channel speaker system.

If you are using 6 channel speaker, connect the front L/R speakers to Line-out and the rear L/R speakers to Line-in. Connect the Center/Bass to Mic-in.



## 3 **Quick BIOS Setup**

This motherboard allows you to change your memory and onboard peripheral settings in BIOS setup. After the hardware installation is complete, turn the power switch on, then press the <DEL> key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will be shown on the screen. Then, follow these steps to configure your system.

### **Step 1. Select [STANDARD CMOS SETUP]**

Set [Date/Time] and [Floppy drive type], then set [Hard Disk Type] to “Auto”.

### **Step 2. Select [LOAD OPTIMIZED DEFAULTS]**

Select the “LOAD OPTIMIZED DEFAULTS” menu and type “Y” at the prompt to load the BIOS optimal setup.

### **Step 3. Select [SAVE & EXIT SETUP]**

Press <Enter> to save the new configuration to the CMOS memory, and continue the boot sequence.

## 4 **The SOYO CD**



**The SOYO-CD will Auto Run only in Windows Based Operating Systems.**

Your SY-KT600 DRAGON Plus motherboard comes with a CD-ROM labeled "SOYO CD." The SOYO CD contains

- a. The user's manual for your new motherboard in PDF format,
- b. The drivers software available for installation, and
- c. A database in HTML format with information on SOYO motherboards and other products.

### **Step 1. Insert the SOYO CD into the CD-ROM drive**

If you are running Windows NT/2K/XP, the SOYO-CD will not detect your motherboard type. In that case the following dialog will pop up. Please choose your motherboard model number and press OK.



Now the SOYO-CD Start Up Menu will come up as shown on the following page:

## SY-KT600 DRAGON Plus Quick Start Guide



### (SOYO CD Start Up Program Menu)

Under Windows 95/98/ME, the SOYO CD Start Up Program automatically detects the SOYO motherboard the system uses and displays the corresponding model name.

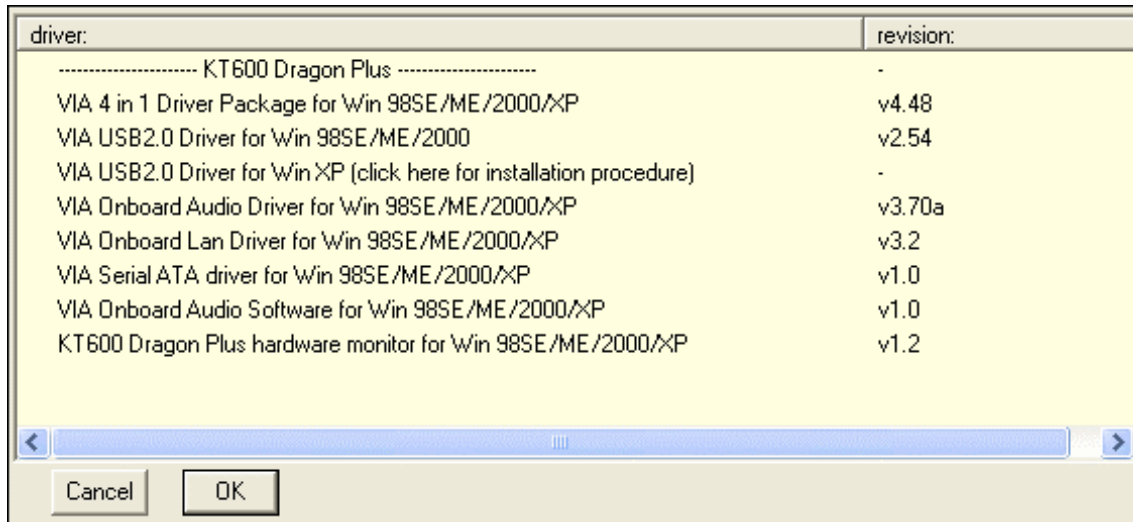
The user's manual files included on the SOYO CD are in PDF (Postscript Document format). In order to read a PDF file, the appropriate Acrobat Reader software must be installed in your system.

**Note:** The Start Up program automatically detects if the Acrobat Reader utility is already present in your system, and otherwise prompts you on whether or not you want to install it. You must install the Acrobat Reader utility to be able to read the user's manual file. Follow the instructions on your screen during installation, then once the installation is completed, restart your system and re-run the SOYO CD.

## SY-KT600 DRAGON Plus *Quick Start Guide*

### Step 2. Install Drivers and Utilities

Click the **Install Drivers** button to display the list of drivers software that can be installed with your motherboard. The Start Up program displays the drivers available for the particular model of motherboard you own. We recommend that you only install those drivers.



(Driver Installation Menu)

A short description of all available drivers follows:

➤ **VIA 4 in 1 Driver Package for Win 98SE/ME/2000/XP**

VIA 4 In 1 driver includes four system drivers to improve the performance and maintain the stability of systems using VIA chipsets. These four drivers are:

VIA Registry (INF) Driver, VIA AGP VxD driver, VIA ATAPI Vendor Support Driver and VIA PCI IRQ Miniport Driver.

➤ **VIA USB2.0 Driver for Win 98SE/ME/2000**

This setup program will install the driver for VIA USB 2.0 Host Controller for Windows 98SE and Windows ME. For Windows XP, please check Chapter 6.

➤ **VIA Onboard Audio Driver for Win 98SE/ME/2000/XP**

You have to install the drivers before installing any application for the Onboard Audio.

➤ **VIA Onboard Lan Driver for Win 98SE/ME/2000/XP**

This setup program will install the Driver for VIA Onboard Lan.

➤ **VIA SerialATA driver for Win 98SE/ME/2000/XP**

This program is for install Driver to use Serial ATA function.

➤ **VIA Onboard Audio Software for Win 98SE/ME/2000/XP**

This driver supports 2/4/6 speakers with 3D stereo enhancement.

➤ **KT600 DRAGON Plus Hardware monitor for Win 98SE/ME/2000/XP**

Your motherboard comes with a hardware monitoring IC. By installing this utility, Temperature, Fan speed and Voltages can be monitored. It is also possible to set alarms when current system values exceed or fall below pre-set values.

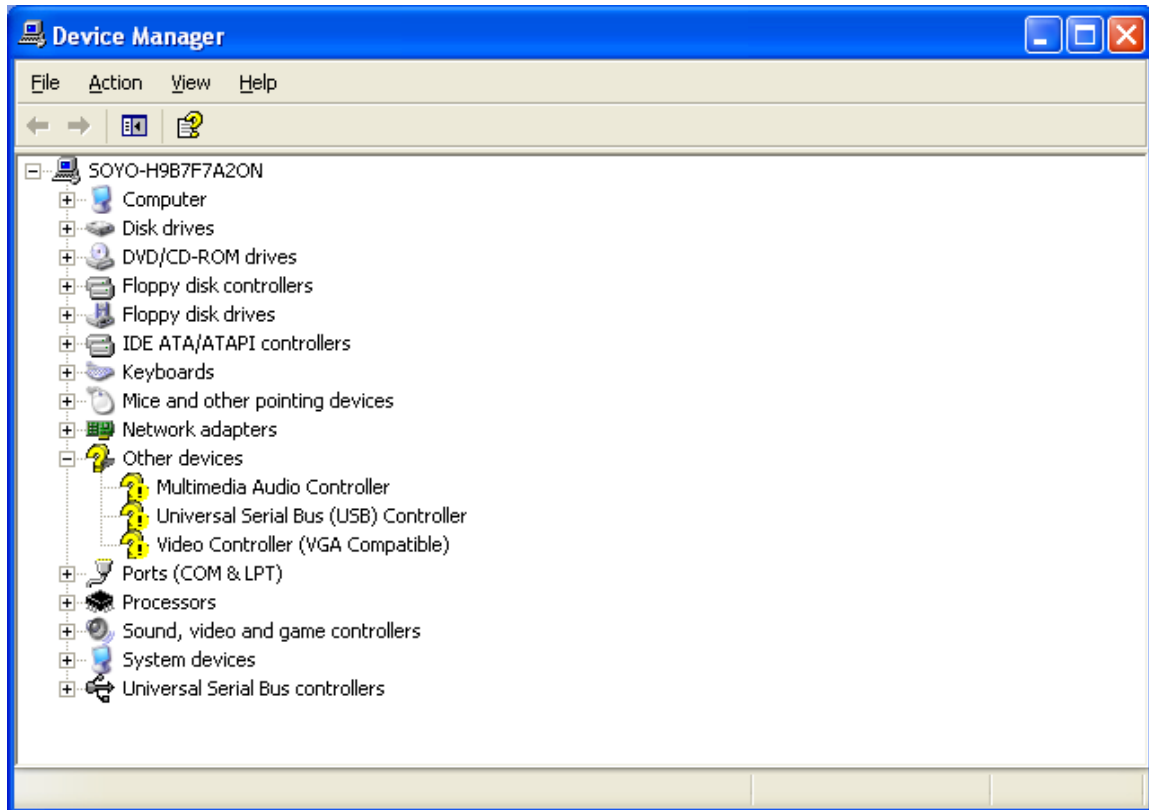
### **Step 3. Check the Latest Releases**

Click the 'Check the latest Releases' button to go the SOYO Website to automatically find the latest BIOS, manual and driver releases for your motherboard. This button will only work if your computer is connected to the internet through a network or modem connection. Make sure to get your modem connection up before clicking this button.

## SY-KT600 DRAGON Plus *Quick Start Guide*

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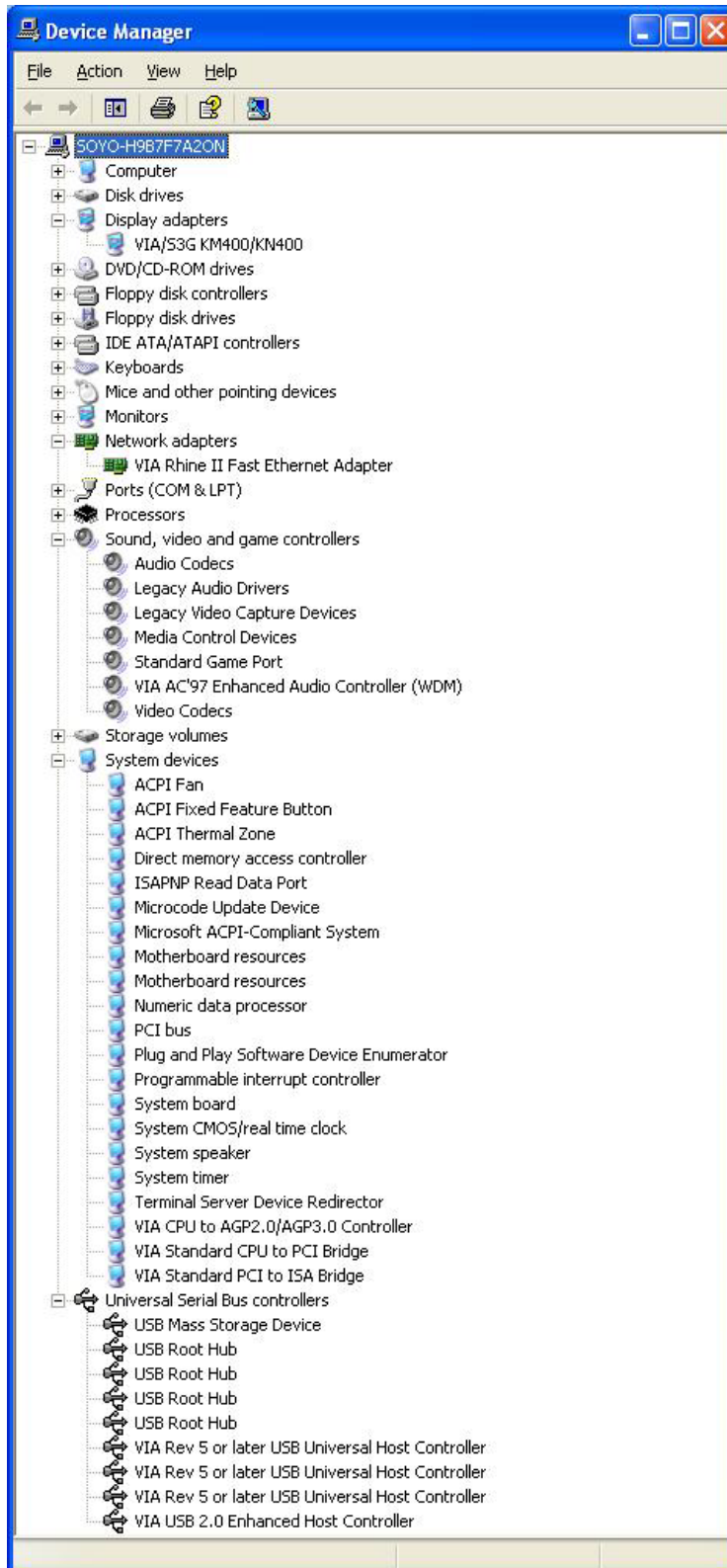
After Windows XP installation, your device manager should look like this:





## SY-KT600 DRAGON Plus Quick Start Guide

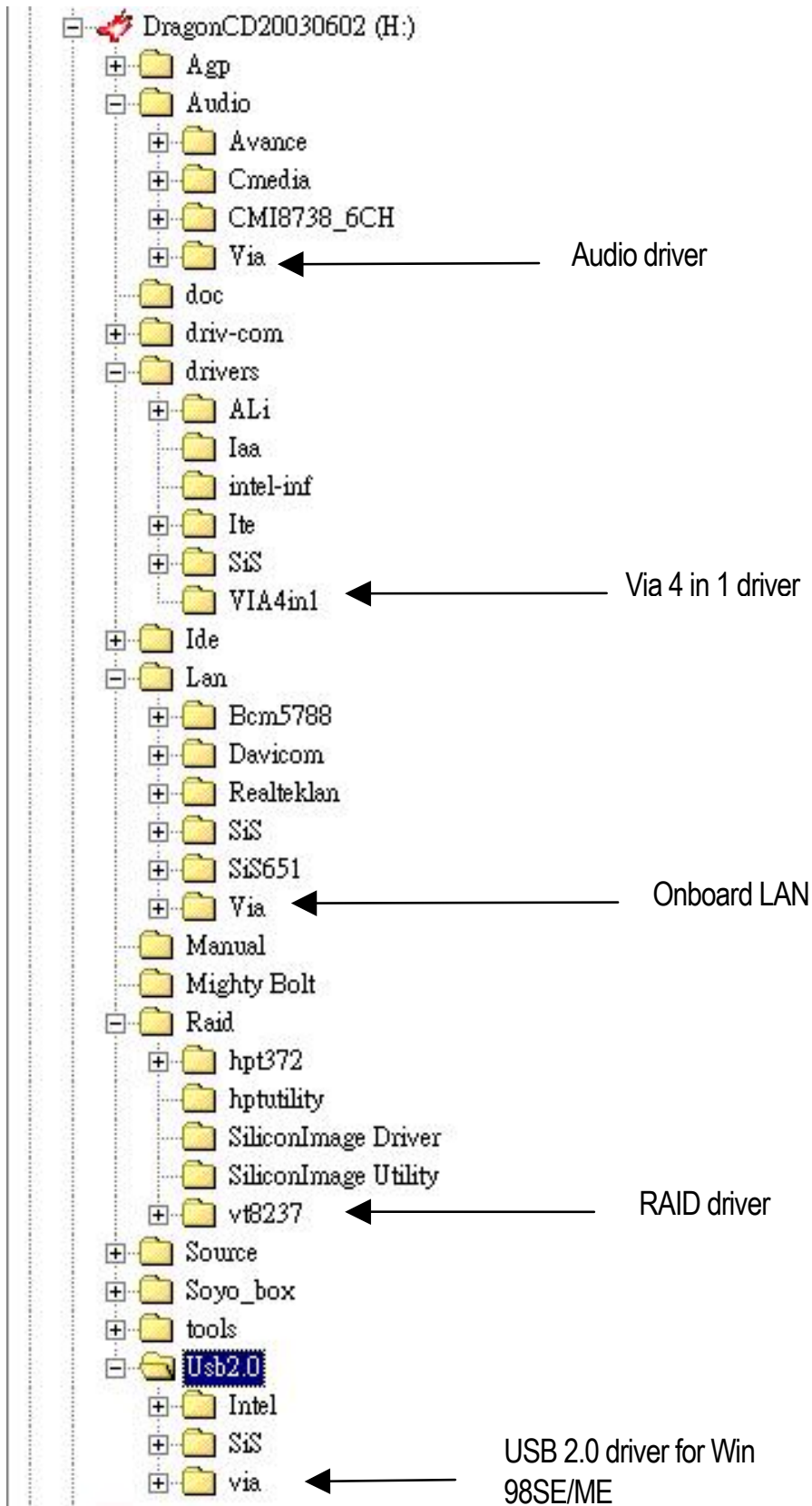
After driver installation, your Windows XP device manager should look like this:



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Drivers directory list in the CD driver

The SOYO CD



## **5 Audio Driver Installation**

### ***Audio Driver Installation for Windows 98/98se***

After you have installed the audio driver, windows may prompt you to restart your computer.

When your computer has restarted it may look for the windows driver on your windows installation CD and ask you to insert your installation CD into your CD-drive. At this point you need to insert the windows installation CD into your CD-drive. You will then be prompted to select the correct directory on your windows CD.

## 6 **USB2.0 Driver Installation**

### **USB2.0 Driver Installation for Windows XP**


USB 2.0 drivers are available for download using Windows Update for Windows XP.

For additional information regarding USB 2.0 support in Windows XP, please visit

<http://www.microsoft.com/hwdev/bus/USB/default.asp>

(Windows XP Service Pack1 Include USB2.0 Driver)

After installing service pack1, please do the following:

- 1) Go into the device manager.
- 2) Remove "  Universal Serial Bus (USB) Controller "
- 3) Restart your system.

Next time Windows XP starts up a new USB 2.0 controller will be found.

## 7 **VIA 8237 Serial ATA Driver Installation**

You can use your VIA 8237 (SATA1,SATA2) as

1. Normal IDE function.
2. RAID function. (RAID0, 1)

**To use SATA1 and SATA2 as normal IDE, please do the following steps**

1. Go to the CMOS setup → Integrated Peripherals → VIA Onchip IDE device → “Onboard SATA1,2” to enable.
2. Then set the SATA Mode to “IDE”
3. Install the VIA Serial ATA driver, see driver installation instruction below.

**To use SATA1 and SATA2 as RAID controller, please do the following steps**

1. Go to the CMOS setup → Integrated Peripherals → VIA Onchip IDE device → “Onboard SATA1,2” to enable..
2. Then set the SATA Mode to “RAID”
3. Go to the CMOS setup → ADVANCED BIOS Features → and set the “First Boot Device” to “SATA1,2, SCSI”.
4. Set the “SATA1,2 & SCSI Boot Order” to “SATA1,2 ,SCSI”.

### ***Installing VIA 8237 SATA during OS Installation***

#### **Install driver during Windows XP installation**

1. Set the folder options to “show hidden files and folders”, check Microsoft help for more info on how to set this option.
2. Go to “**d:\raid\vt8237\driver disk**” directory, (assuming that your CD-ROM is drive d) copy all the files to a floppy disk. Some files are hidden, so step #1 must be done.
3. Windows XP will start to inspect your hardware configuration.
4. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver....” Appear. below
5. Press **S** key to specify additional devices when the **Windows XP Setup** window appears.
6. Insert the floppy disk of driver, then press **Enter** to continue
7. In the follow-on window of device type, please select “**VIA 8237 SATARaid controller for windows XP** ” to continue.

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8. Win XP will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue.
9. The follow-on interface will list the devices to be installed, in which “**VIA 8237 SATAraid SATAraid controller for windows XP**” item should be included. (If users want to install other devices, press “S” at this time.) Press ENTER to continue Windows XP setup.

### Install driver during Windows 2000 installation

1. Set the folder options to “show hidden files and folders”, check Microsoft help for more info on how to set this option.
2. Go to “**d:\raid\vt8237\driver disk**”, (assuming that your CD-ROM is drive d) copy all the files and directory to a floppy disk. Some files are hidden, so step #1 must be done.
3. Windows 2000 will start to inspect your hardware configuration
4. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver...” Appear.
5. Press **S** key to specify additional devices when the **Windows 2000 Setup** window appears.
6. Insert the floppy disk of driver, then press **Enter** to continue
7. In the follow-on window of device type, please select “**VIA 8237 SATAraid controller for Windows NT and 2000**” to continue
8. Win 2K will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue
9. The follow-on interface will list the devices to be installed, in which “**VIA 8237 SATAraid controller for Windows NT and 2000**” item should be included. (If users want to install other devices, press “S” at this time.) Press ENTER to continue Windows 2000 setup

# Quick Trouble shooting tips

## Boot-up Issues

**The system does not power-up, no beeping sound heard and the CPU fan does not turn on.**

1. Check if the power cord is plug into the power source.
2. Check if the power is connected to the M/B.
3. Check if the cable of the case power button is connected to the M/B power button connector (see Connectors and Plug-ins section in this Quick start guide for more info).
4. Make sure the power supply is not defective. Change the power supply. The minimum should be a 350 watts AMD recommended power supply.
5. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

**The system powers-up, but no video, or beeping sound heard. The CPU fan is turning.**

1. Clear CMOS battery. (JP5 connector, see this Quick start guide for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B.
3. Check if the CPU is ok, by using another CPU (check the Quick start guide for CPU supported on this M/B).
4. Check if the power supply is ok. The minimum should be 350 watts, AMD approved.
5. Make sure the CPU fan is connected to CPUFAN1 connector.
6. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

**The system power-up, no video, beeping heard.**

1. Clear CMOS battery. (JP5 connector, see this Quick start guide for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B.
3. Check if the memory module and the VGA card (if onboard VGA is not used) are inserted properly in the M/B.
4. If yes, change the memory module, it might be defective. Make sure the memory specification is supported by the M/B. (for more info on this, check our FAQ on the website).
5. Change the VGA card (if used).

**The system turns on for some seconds then shutdown by itself.**

1. Check if the CPU fan is connected to the CPUFAN1 connector.
2. The CPU might be overheating. Check the CPU fan if it is defective, also see if the CPU fan is in contact with the CPU.
3. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
4. Make sure the power supply you have on your system support the M/B specification.

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Example. If you have a P4 M/B, you need to use a P4 power supply.

5. If you already checked the power supply specification, change the power supply it might be defective. The minimum is 350 watts AMD approved.

**When I boot up my system, everything works fine, it sees my CPU and memory, detects my hard drive, floppy drive and CD-ROM but locks up at "Verify DMI pool data... ". It doesn't boot go any further. What should I do?**

1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
2. If still has the problem, remove all other add-on cards (use onboard vga) and see if it boots further. Then put peripherals in one by one to identify which one of them causes the lockup.
3. Change the CPU.

**During Boot-up, my computer says CMOS memory Checksum error. What can be the problem?**

1. Clear CMOS memory.
2. Re-flash BIOS. Check on how to flash BIOS on the later part of this guide.
3. Change the CMOS battery, the battery might be drained.
4. The BIOS chip might be failing.

**I hear a 1-2 beeping sound and then the system shut down, what is the problem?**

Verify that the CPU fan is connected to the CPUFAN1 connector.

## **Stability Issues**

**My system intermittently locks up, very unstable**

1. Check the CPU Temperature, your CPU might be overheating. Change the CPU FAN.
2. Do not overclock your CPU
3. Check the specification of the memory module, maybe the M/B does not support it.
4. Go to BIOS setup and load fail safe settings. Please check if the system performance in the BIOS setup is set to Turbo/Maximum. Set it to normal if this is the case
5. Check the website for the latest BIOS update.
6. Check the website for FAQ's regarding instability issues.
7. Change the memory module or CPU.
8. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them, or use a power supply with a higher wattage.
9. Install the VIA 4 in 1 driver set.

**My system intermittently locks up, during Windows installation.**

1. Go to BIOS and load the "load optimized defaults".
2. Check the website for any BIOS updates.



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3. If you still have the problem, remove all other add-on cards except for CPU/ Memory/ onboard Video/ Hard disk. See if you can finish Windows installation. Then put peripherals in one by one to identify which one causes the lockup.

### **My system will not boot-up when I set my CPU to 133MHz FSB. It works with 100MHz FSB**

1. Make sure to put some thermal paste on the CPU.
2. CPU might be defective.
3. Use an AMD approved power supply of at least 350 watts. If the problem persists, try booting with only onboard VGA/harddisk/memory and see if the problem disappears. If it does, likely you need a power supply that has a higher wattage.

## **BIOS Issue**

### **Where can I find the BIOS revision of my mainboard?**

It will be displayed on the upper-left corner of the screen during boot-up. It will show as your board type followed by the revision number, such as kvxa\_2BA1 (meaning BIOS revision 2BA1 for the SY-K7V Dragon plus! mainboard) or 6BA+ IV\_2AA2 which means SY-6BA+ IV motherboard, with a 2AA2 BIOS.

### **Where can I find the latest BIOS of my motherboard?**

Please go to the technical support page of one of the SOYO websites (Taiwan: [www.soyo.com.tw](http://www.soyo.com.tw), US: [www.soyousa.com](http://www.soyousa.com), Germany: [www.soyo.de](http://www.soyo.de)), and look up your motherboard to find the latest BIOS revision.

### **How can I flash the BIOS?**

1. Download the BIOS on our support website.
2. Make a bootable floppy disk with out any memory manager loaded (i.e. himem, emm386, etc...).
3. Copy the BIOS file and awdfash utility to the diskette.
4. On the CMOS setup and disable CIH 4-way protection.
5. Type "awdfash biosname.bin /sn /py".
6. Reboot.

### **After flashing the BIOS, my system will not boot-up.**

1. Try clearing the CMOS.
2. The BIOS chip is defective due to an unsuccessful flash, contact your nearest SOYO branch for re-flashing.

### **Is there a way to reprogram my BIOS after an unsuccessful flash?**

No other way, you need to send back the BIOS ROM to your nearest SOYO branch for re-flashing.

### **VGA Issue**

**After waking up from Suspend to RAM or Standby mode, the screen has no display but I can hear the hard disk operating**

1. Install the VIA 4 in 1 driver set.
2. Check the VGA card manufacturer for a driver update (if using a different video card then the onboard video), and make sure the VGA card supports the Suspend to Ram function.
3. Update your VGA card's BIOS (in the case of a video card other then the onboard video). Check your VGA card manufacturer for more details.

### **Audio Issue**

**How can I disable the on-board Audio?**

Go to the SOYO Combo Feature in BIOS setup, then set the "AC97 Audio" setup option to disabled.

**I cannot get the sound working on my system.**

1. Check if the speaker wire is connected to the line out connector on the M/B.
2. Check if the speaker power is powered on.
3. Install the audio driver supplied on our driver disc.
4. Check BIOS setup if "AC97 Audio" setup option is enabled.
5. If sound already installed, check our website for audio driver updates.

**I cannot get the sound working using 5.1 channel speakers.**

1. Install the audio driver and application. Check driver installation for more info.
2. Check if the settings in the VIA Mixer program and in the Control Panel are correct.
3. Check if the speaker connection to the M/B is correct.
4. Make sure the software setup is correct. Check the manual for more info.

**The sound is working in my system, but when I play CD music from the CD-ROM, I do not get any sound. What is wrong?**

This is because the 3-wire audio cable from the CD-ROM to the on-board CDIN1 connector in the M/B is not connected. See the beginning of this guide for the location of CDIN1.

**The sound and everything else works fine except that the line-in and microphone do not work.**

**What is wrong?**

1. Please go to sound properties and check if the line-in and microphone in are enabled and not muted.
2. Check if the Microphone is ok.
3. When using 6 speakers the line-in and microphone channels are used for rear, center and bass. 6-Channel audio and microphone/line-in can not be used at the same time.

### **Hard disk/FDD/ CD-ROM issue**

**My Western digital HDD is not detected during boot-up.**

Change the jumper settings to cable select or single.

**Sometimes the system finds my CD-ROM, sometimes not.**

1. Check CD-ROM if it is working properly.
2. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them.

**When I boot up my new computer, I get "floppy boot failure" and the LED on the floppy stays on.**

Make sure the red wire of floppy ribbon cable goes to Pin1 on the floppy drive side (don't trust the "key lock" or "notch") and use the end-connector of the cable (don't use middle one).

### **LAN Issues**

**During LAN driver installation, the system hangs on 75%, why?**

Enable the onboard LAN in the BIOS setup.

**I have problem installing Novell NetWare v.50.**

Disable the APIC option in the BIOS.

**For updated FAQs, please check**

<http://www.soyo.com.tw/faq.htm> or <http://www.soyousa.com/faqs.html>

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### **How to contact us:**

- If you are interested in our products, please contact the SOYO sales department in the region you live.
- If you require Technical Assistance, please contact our Technical Support in the region you live.

SOYO prefers Email as communication medium, remember to *always add to the email the country that you live in.*

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